

Wang et al. Appl. No. 10/015,887 Atty. Docket: 1875.1260001

## Amendments to the Claims

- 1. (Canceled)
- 2. (Currently Amended) A differential amplifier, comprising:
  - a differential input capable of receiving a differential signal;
  - a first differential pair coupled to said differential input;
- a second differential pair, coupled to said differential input, and connected in parallel with said first differential pair at a differential output;
- a differential offset circuit, coupled within a differential signal path between said differential input and said second differential pair, and capable of level shifting said differential signal from a first level to a second level; and
- a differential switch circuit, coupled to said first differential pair and said second differential pair, and capable of controlling a first current flow to said first differential pair and a second current flow to said second differential pair.
- 3. (Canceled)
- 4. (Canceled)
- 5. (Currently Amended) A differential amplifier, comprising:
  - a differential input capable of receiving a differential signal;
  - a first differential pair coupled to said differential input;

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a second differential pair, coupled to said differential input, and connected in parallel

with said first differential pair at a differential output; and

a differential switch circuit, coupled outside a differential signal path to said first

differential pair and outside said differential signal path to said second differential pair, and

capable of controlling a first current flow to said first differential pair and a second current

flow to said second differential pair, pair; and

a differential offset circuit, coupled between said differential input and said second

differential pair, and capable of level shifting said differential input signal from a first level to

a second level.

6. (Canceled)

7. (Original) The differential amplifier of claim 5, wherein said differential switch circuit

comprises:

a first switch MOSFET coupled between said first differential pair and a current

source; and

a second switch MOSFET coupled between said second differential pair and said

current source.

8. (Canceled)

9. (Currently Amended) The differential amplifier of claim § 5, wherein said differential

switch circuit changes said first current flow relative to said second current flow, based on a

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comparison between a common mode voltage of said differential input signal and a reference

voltage.

10. (Currently Amended) The differential amplifier of claim & 5, wherein said differential

switch circuit increases said first current flow relative to said second current flow, when a

common mode voltage of said differential input signal approaches said first power supply

voltage.

11. (Currently Amended) The differential amplifier of claim § 5, wherein said differential

switch circuit decreases said first current flow relative to said second current flow, when a

common mode voltage of said differential input signal approaches said second power supply

voltage.

12-18. (Canceled)

19. (Currently Amended) A method of extending an input signal range of a component that

receives the an input signal, comprising the steps of:

(1) level shifting a voltage of the input signal;

(2) processing said level shifted voltage within the component; and

(3) selecting a subcomponent, from a plurality of subcomponents within the

component, to process said level shifted voltage: voltage;

wherein the level shifting is performed by a first circuit within a signal path of the

input signal; and

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wherein the selecting is performed by a second circuit outside the signal path of the input signal.

20. (Currently Amended) A method of extending an input signal range of a component that receives the an input signal, comprising the steps of:

- (1) level shifting a voltage of the input signal;
- (2) processing said level shifted voltage within the component; and
- (3) responding to a comparison between a common mode voltage of the input signal and a reference voltage to select a subcomponent from a plurality of subcomponents within the component to process said level shifted voltage. voltage;

wherein the level shifting is performed by a first circuit within a signal path of the input signal; and

wherein the selecting is performed by a second circuit outside the signal path of the input signal.

21. (Previously Presented) The method of claim 19, wherein step (2) comprises the step of: amplifying said level shifted voltage within the component.

This listing of claims will replace all prior versions, and listings of claims in the application.